



Missouri Department of Natural Resources

Water Quality Coordinating Committee Water Protection Program

Minutes

June 15, 2004

WATER QUALITY COORDINATING COMMITTEE

USGS Columbia Environmental Research Center
4200 New Haven Road
Columbia, Missouri

June 15, 2004
10:00 a.m.

MEETING AGENDA

Herps in the Watershed (And what is a herp, anyway?)
Jeff Briggler, Missouri Department of Conservation

Project W.E.T. in Missouri
Joe Pitts, DNR, Outreach and Assistance Center

Other
303(d) List Issues - Update
Letters of Approval for Animal Feeding Operations

Agency Activities

Meetings & Conferences

Adjourn by noon

1:00 FOLLOW-UP MEETING ON USE ATTAINABILITY ANALYSES (UAAs)

All interested parties are invited to attend this meeting which will include a presentation of Kansas' UAA procedures and discussion of UAA procedures for Missouri. If you would like to receive a copy of draft procedures, please e-mail Stacia Bax at stacia.bax@dnr.mo.gov

(Note: Attendees in May suggested the meeting be held in Jefferson City, however, we weren't able to secure an appropriate meeting room and therefore left the meeting location in Columbia as originally scheduled.

-- Becky)

MISSOURI WATER QUALITY COORDINATING COMMITTEE

June 15, 2004

USGS Columbia Environmental Research Center
4200 New Haven Road
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MINUTES

Attendees:

Becky Shannon	DNR/WPSCD/WPP-WPCB	Jennifer Harness	CDM
Ann Crawford	DNR/WPSCD/WPP-WPCB	Ronald French	CDM
Debbie A. Kruzen	Water Sentinel/Sierra Club	Mary Lappin	KC MO WSD
Joe Pitts	DNR/Outreach & Assistance Ctr	John Sadler	USDA-ARS
Priscilla Stotts	DNR/WPSCD/WPP-WPCB	Trent Stober	MEC
Cindy DiStefano	MO Dept. of Conservation	Amy Salveter	US Fish & Wildlife
Michael Bollinger	Ameren	Gail Wilson	DNR/WPSCD/WPP-WPCB
Mary West	City of Moberly	Ken Struempf	DNR/WPSCD/SWCP
Charles Hays	DNR/GSRAD/WRP	Michael Heaton	DNR/WPSCD/NERO
Terry Frueh	Boone County	Caitlyn Peel	St. Louis HBA
Jack Dutra	Syngenta	Jim Hull	DNR/WPSCD/WPP
Bob Ball	USDA-NRCS	Jeff Briggler	MDC
Bob Hentges	MO Public Utility Alliance	Stacia Bax	DNR/WPSCD/WPP-WPCB
John Lodderhose	St. Louis MSD	Phil Schroeder	DNR/WPSCD/WPP-WPCB
Susan Myers	St. Louis MSD	Anne Peery	DNR/WPSCD/WPP-WPCB
Randy Lyman	Springfield Public Works	Larry Shepard	EPA Region VII
Bart Hawcroft	MO Dept of Agriculture	Darlene Schaben	DNR/WPSCD/WPP-WPCB

Introductions were made.

Herps in the Watershed (And what is a herp, anyway?), Jeff Briggler, Missouri Department of Conservation PowerPoint Presentation

Jeff is a herpetologist for the Department of Conservation. He said they are just starting to learn about the effects of water quality on amphibians and reptiles. There are different herps associated with each of the river systems or segments within the rivers. There are two sub-species of hellbenders in Missouri. The Ozark Hellbender are found in streams that flow south into Arkansas (like North Fork, Current, Bryant, Eleven Pt., Jacks Fork); the Eastern Hellbender are found in streams that flow north (like Niangua, Gasconade, Big Piney, Big River, Meramec). This animal is found in the cold water of these streams and is the largest aquatic salamander. In August-October females lay 200-400 eggs. The eggs hatch within 50-65 days after they are fertilized. They have feathery gills and big yellow "yolk" sack on the under side. Very little is known about the life history of the "larval" stage. They go into the gravel and feed on small insects. This animal is definitely declining in this state. They need fast flowing, well-oxygenated streams. Some potential known threats are impoundments built for reservoirs or low water bridges, illegal and legal collection, recreation by anglers, stream siltation, habitat loss and water quality. Hellbenders have been known to live 55 years in captivity. They are also studying estrogen buildup in hellbenders. Of late, several hellbenders in rivers and streams are being noticed with missing legs. The cause is unknown at this time. Amy added that some are also missing toes or eyes and some have lesions.

Salamanders, as well as map turtles, are good indicators of good water quality. The map turtles are found in larger rivers and feed mainly on insects. Chemicals can get in the water to kill the insects. The turtles absorb chemicals in the water, which are stored in their body fat and used during hibernation. So, over time they end up poisoning themselves. During May-June and early August, they lay 12-13 eggs on the riverbanks. The eggs are temperature dependent. There is very little data available because they are very difficult to capture.

Mud puppies are another species found in Missouri. They are 12-13 inches in length. They retain their feathery gills throughout their life. Very little life history is known of this animal and may disappear before anything can be found on them.

Jeff showed pictures of different kinds of lungless salamanders, which breathe through their skin and live on land along edges of rivers and streams but deposit their eggs in the water. Water quality is very important to them. Jeff also talked about the life cycle of frogs. Eggs are deposited in February or early March. Chemical pollutants affect all these amphibians. The general rule of thumb is that no amphibian or reptile can tolerate a pH below 4. Atrazine is the number one herbicide used; Roundup is number two. A paper published last year showed that it only took .03 ppm of Atrazine to change a male frog into a female frog. Jeff stressed that this study has not been replicated. At a recent herp conference that Jeff attended, they indicated that Roundup used in wetlands with a dose varying from .6-2.5 mg/L of active ingredient killed 50% of amphibians. If 2.5 mg/L was used, 96-100% larval of amphibians would be killed. More care is needed even when using Roundup on the land around water. Approximately 68-86% of juveniles can be killed because of toadlets or froglets hopping around out of the water. More people are investigating these effects to learn more about them since these animals readily absorb these chemicals. Insecticides, like carbaryl, have been studied extensively. Indirectly, herbicides and insecticides affect these animals because they kill the algae and insects that they feed on.

Another curiosity is what are the effects of the active ingredients of sunscreen in the water. Jeff is hoping that the study by UMR on hellbenders will help shed some light on water quality issues for a lot of species. More research is definitely needed. The existing data for chemicals is limited. Amphibians are affected by direct mortality, an increased rate of deformities, their rates of growth and development, and altered behaviors by not recognizing predators. Jeff felt that habitat destruction and loss of habitat are the major reasons that amphibians and reptiles and other animals are declining.

Jeff passed out "hellbender" stickers. Larry mentioned that Jason Daniels is the herp contact at EPA. He is the contact for an organization called "Partners in Amphibian and Reptile Conservation" (PARC), which includes federal and state agencies, private sector, conservation organizations and academic entities. He circulated a couple of documents. More information can be found on the web site: www.parcmidwest.com. Jeff said this is a big organization and they are making management guidelines for a lot of herps. The midwest guidelines are completed.

Project W.E.T. in Missouri, Joe Pitts, DNR, Outreach and Assistance Center PowerPoint Presentation

Joe is the Chief of the Environmental Education Unit with the Outreach and Assistance Center. He is the state project coordinator for Project W.E.T. He said in 1992 a national group decided to develop a curriculum supplement for teachers that used water as the basis for the educational forum. Project W.E.T. (Water Education for Teachers) was the result. The guide was developed by teachers at a series of writing workshops. Joe and another teacher from Missouri were invited to help write that guide. In 1995, the book was published; DNR became the state sponsor and Joe was named as the state coordinator for Project W.E.T. The first workshop was presented in 1996. (Joe had a copy of the book.) The book includes 91 activities written by teachers for teachers. Project W.E.T. is international in scope with a program in all 50 states. Missouri was the 24th state to accept Project W.E.T. The mission is to reach children, parents, educators and communities of the world with water education and aimed at educators and students K-12. The materials are designed to help students develop awareness, knowledge, skills and commitment to water and water issues. It is hoped that this knowledge will

lead to informed decisions, evaluated choices, responsible behavior and constructive things like storm drain stenciling. Awareness and respect for water can encourage a personal lifelong commitment of responsibility and positive community involvement. Each activity in the guide integrates with the curriculum. Through a grant with the Department of Elementary and Secondary Education (DESE), Project W.E.T. was correlated with the Missouri Show-Me Standards, which is what Missouri children are being taught. A series of steps are gone through until the solution to the problem is reached. It teaches critical thinking and analytical skills, which is required by the No Child Left Behind Act. The focus is on teaching students how to think, not what to think. This is one important difference between Project W.E.T. and other environmental education programs. The program presents facts, maintains objectivity and provides guidance.

Project W.E.T. is used by classroom teachers in both private and public schools. Since 1996, over 4,000 Missouri educators have been trained. Park naturalists, education consultants at MDC, park rangers, museum staff, youth organizations and university staff use this guide for their work. The guide can only be obtained by attending the 6-hour workshop. Advanced and college credit workshops are also held.

The curriculum is supplemented by additional programs and publications, i.e., a new publication written by educators called "Discover a Watershed: The Missouri," which is about the Missouri River. Joe showed a sample page of one of the activities. The activities are organized by themes. The program is a multi-disciplinary approach to water issues. Joe talked about several publications available for sale and other contact information through the web site: www.projectwet.org. He showed how Project W.E.T. starts with a coordinator who trains facilitators who can then schedule workshops to train educators who work with students. Joe has trained 280 facilitators since 1996. Almost all counties within the state have a Project W.E.T. facilitator.

There are 69 coordinators and co-coordinators from 50 states and territories. Nationwide, there are 3,000 facilitators at this time. States differ in that some have volunteer facilitators where others are paid to do workshops. Project W.E.T. in Missouri is self-funded with fees from workshops and Joe's time and office resources. About 50% of the facilitators Joe works with are teachers and others are non-formal educators that work for agencies, volunteers and parents. The head office is in Bozeman, Montana. An annual conference is held at Montana State University. Advanced coordinator training opportunities are available through this conference. They write and publish articles on their projects for the national magazine.

Joe had available a sampler of the Project W.E.T. guide, a Project W.E.T. informational brochure and an Environmental Education: Meeting the Show-Me Standards brochure. Approximately 24 six-hour workshops are being held each year. Facilitators also hold about as many workshops. They are always looking for groups to schedule workshops and find meeting locations. It is important to get the level of environmental knowledge and awareness to these students who will be the decision-makers about the watershed in the future.

At the national level, Project W.E.T. is working on developing an RFP for a study not only for teacher knowledge transfer but also knowledge transfer between teacher and student. Joe said that if anyone can get a group of 15 teachers together, he can find a facilitator to do the workshop. Contact Joe if you are interested in attending one of the 6-hour trainings. He is interested in providing a workshop for public utilities. Contact Joe at (573) 526-6627 or (800) 361-4827 or joe.pitts@dnr.mo.gov.

Other

303(d) List Issues – Update, Phil Schroeder - Phil felt that the two day-long stakeholder meetings provided a very good basis from which to finalize a detailed 303(d) list methodology document. He thanked those who attended those meetings. The detailed draft methodology document is ready to be placed on public notice on June 25, 2004, for a 60-day comment period. It will be on the web. Comments will be reviewed and any adjustments necessary would be made before presenting it to the Clean Water Commission at the September 22 meeting. If approved, the rulemaking would proceed as well as starting on a draft of the 2004 303(d) list using that methodology. These will be concurrent. There will be another 60-day comment period for the draft 303(d) list as well as a public meeting, as stated in the rule. So, there will be opportunities for comments.

Letters of Approval for Animal Feeding Operations, Becky Shannon – Becky said the change in procedure to stop issuing Letters of Approval for animal feeding operations is moving forward. Applications received by May 31, 2004, will be processed. If a facility has a construction LOA but not an operating LOA, a commitment has been made to work with those facilities even after July 1. Options will be available to a facility for funding purposes if they are putting in an animal waste system. Letters will be sent to 319 grant managers indicating they can use the assistance of NRCS or Registered Professional Engineers in Missouri to design those systems and then receive cost-share. This may also work with AgNPS SALT projects and small business loans through the Department of Agriculture. Jim added that there are rules pertaining to the LOA process that will be rescinded.

Becky mentioned that the 319 grant applications are due July 1, 2004.

Agency Activities

Bob Ball had available copies of the 2003 Annual Report. It includes program activities and accomplishments. Bob mentioned that the NRCS course on “Introduction to Water Quality” is going to be revised. It will be made into a more generic water quality training course. Bob is serving on the review committee. Let him know if you have any suggestions.

Ron French asked who the EPA contact would be for the Peruque Creek project. Jason said it would be Pete Davis. Becky asked Ron if they could do a presentation on the project to the group in a couple of months.

John Sadler said the RFA is out for the Conservation Effectiveness Assessment Project (CEAP) that he presented to the group previously. They are working with the university on a proposal.

Gail Wilson said the Second Nicolson Creek TMDL has been approved by EPA.

Joe Pitts said Project W.E.T. would work nicely with Phase II Stormwater for communities that are looking for an outreach and education type component. Joe would be happy to work with staff and the community to see how Project W.E.T. would work for the community and be tied to the plan.

Phil Schroeder reminded the group that the discussion on Use Attainability Analysis protocols for recreational uses would be held this afternoon at this same location.

Anne Peery said the modified 2002 303(d) list is now on the DNR web site. She mentioned that the Manacle Creek TMDL has been forwarded to EPA for approval. McKenzie Creek TMDL is currently on public notice for comments. Becky clarified that the official 2002 303(d) list is on EPA’s web page. Anne worked with EPA and added information in some blanks, like the county or the location, to make the list more complete. Anne mentioned that the TMDL schedule for this year is on DNR’s web site.

Larry Shepard mentioned that the on-going litigation with EPA in Kansas City on outstanding federal promulgation addressing Water Quality Standards is on-going. River Relief is conducting their Missouri River cleanup in Kansas City on Saturday, June 19, 10:00-4:00, at downtown Berkley Park and Sugar Creek. He reminded the group that starting June 26 to July 4 the Lewis & Clark Commemoration opens in Kansas City. Several activities are planned as well as an air show and fireworks.

Becky reminded the group of the Watershed Working Lands Summit on June 22-24 in St. Louis at the Adam’s Mark Hotel. Let her know if you need more information.

Meetings & Conferences

August 2-6 North Fork Project’s “Watersheds Concepts and Curriculum Review,” Stoutsville